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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/891,606

06/27/2001

Manabu Taniguchi

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8823

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09/14/2004

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EXAMINER

TAMAI, KARL I

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 09/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,606

Applicant(s)

TANIGUCHI ET AL.

Examiner

Tamai IE Karl

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The amended title "MAGNETIC BEARING MANAGEMENT AND CONTROL DEVICE" of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The examiner suggest "MAGNETIC BEARING CONTROL DEVICE WITH COUNTER FOR TIMED MAINTENANCE".

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the counter based on the drive signal from the DSP must be shown or the feature canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

Art Unit: 2834

of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. Claims 1-19 are objected to because of the following informalities: the specification does not provide antecedent basis for the drive signal. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-19 are vague and indefinite because it is unclear what constitutes "based on the drive signal". The specification does not disclose what constitutes "based on", therefore in order to advance prosecution on the merits the examiner will assume that "based on" means the operating time.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 3, 5, 7, 9, 10, 11, 12, 15, 16, 17, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama et al. (Kamiyama)(JP 09-177781) and Hansen et al. (US 4,539,632). Kamiyama teaches that magnetic bearings(including DSP and drive signal) requires need periodic maintenance, but does not teach a counter to signal an alarm when a counter determines a preset time has elapsed. Hansen teaches a digital programmable counter 32 to count the total elapsed operating time (drive signal) for electric machines (col. 3, line 51), and generating an alarm. The broad teaching of Hansen teaches the timer for any industrial machine. It would have

Art Unit: 2834

been obvious to a person of ordinary skill in the art at the time of the invention to construct the magnetic bearings requiring periodic maintenance of Kamiyama with the timer of Hansen to accurately provide periodic maintenance to the bearings, as taught by Hansen.

9. Claims 2, 4, 8, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama et al. (Kamiyama)(JP 09-177781) and Hansen et al. (US 4,539,632), in further view of Nakamura (JP 02-176,218). Kamiyama and Hansen teach every aspect of the invention except the DSP inhibiting the activation of the magnetic bearings. Nakamura teaches that the bearing control circuit include a signal that prevents activation of the bearings in poor condition. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Kamiyama and Hansen with a DSP having activation prevention signal because Nakamura teaches that the magnetic bearings should not be operated in a poor condition.

10. Claims 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiyama et al. (Kamiyama)(JP 09-177781) and Hansen et al. (US 4,539,632), in further view of Yamada et al. (Yamada)(US 6,421,630). Kamiyama and Hansen teach every aspect of the invention except a voice output at the start of the maintenance operation. Yamada teaches the displayed alarm can be either a message on a display, an audible alarm or a voice alarm. It would have been obvious to a person of ordinary

Art Unit: 2834

skill in the art at the time of the invention to construct the motor of Kamiyama and Hansen with voice output at the start of the maintenance operation to warn that the operational time has expired, because it is within the ordinary skill in the art at the time of the invention to choose between known equivalents, where Yamada teaches the equivalence of the display being audible, voice, or visual.

Response to Arguments

11. Applicant's arguments filed 5/21/03 have been fully considered but they are moot in view of the new grounds of rejection.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (703) 872 - 9306.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai
PRIMARY PATENT EXAMINER
September 9, 2004



KARL TAMAI
PRIMARY EXAMINER